Application No. 10/623,178 Amendment dated October 4, 2006 Reply to Final Office Action of August 4, 2006 Docket No.: 09496/000M861-US0

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to said blood circuit between said two ends and configured to

purify blood that is being circulated extracorporeally in said blood circuit; and

a sensor connected to said blood circuit and configured to measure hematocrit values, the

sensor including

a housing connected to a portion of said blood circuit,

a slot provided with said housing,

one of a slit or a plurality of pores included in said slot of said housing,

and

a light emission device and a single light reception device provided with said

housing such that both said light emission device and said single light reception device

are in optical connection with each other and face said blood circuit through either said

slit or said plurality of pores, respectively.

2. (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover

provided at said housing, which covers said slot when said cover is closed.

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3. (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover

provided at said housing, which swings open against said housing and uncovers said slot when

said cover is opened.

4. (Previously Presented) The hematocrit sensor of claim 2, further comprising a holding

device configured to hold the cover in place when the slot is covered.

5. (Previously Presented) The hematocrit sensor of claim 2, further comprising a

detection device configured to detect at least one of whether said blood circuit is in said slot, and

whether said cover is closed.

6. (Previously Presented) The hematocrit sensor of claim 1, wherein said blood purifier

configured to perform dialysis treatment.

7. (Previously Presented) The hematocrit sensor of claim 6, further comprising an

ultrafiltration pump, a substitution fluid, and a dialyzing fluid.

8. (Original) The hematocrit sensor of claim 1, further comprising a drip chamber

connected to said blood circuit.

9. (Previously Presented) The hematocrit sensor of claim 8, wherein said hematocrit

sensor is provided with a fixing device at said housing of said sensor to fix said drip chamber.

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10. (Previously Presented) The hematocrit sensor of claim 1, further comprising an air

bubble detector provided with said housing of said sensor and connected to said blood circuit.

11. (Previously Presented) The hematocrit sensor of claim 1, further comprising a blood

detector connected to said blood circuit and configured to detect a presence of blood in said

blood circuit.

12. (Original) The hematocrit sensor of claim 1, wherein said slit has an adjustable

width.

13. (Previously Presented) The hematocrit sensor of claim 1, wherein at least one of said

plurality of pores has an adjustable diameter.

14. (Currently Amended) A method of measuring hematocrit values, comprising:

providing a sensor connected to a blood circuit, said sensor having a slot with either a slit

or a plurality of pores, and said sensor including a light emission device and a single light

reception device, both of which are in optical connection with each other and positioned to face

said blood circuit through either said slit or said plurality of pores;

emitting light from said light emission device toward blood flowing through said blood

circuit;

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receiving said light at said single light reception device, said light being emitted from

said light emission device and being reflected from said blood flowing through said blood

circuit;

determining a light absorption received by said single light reception device; and

calculating hematocrit values based on a strength of said light absorption determined by

said determining.

15. (Previously Presented) The method of claim 14, wherein:

said light emission device emits light intermittently; and

said hematocrit values calculated in said calculating are corrected based on a strength of

an ambient light received by said single light reception device when said light emission device

does not emit said light.

16. (Previously Presented) The method of claim 14, wherein said hematocrit values

calculated in said calculating are corrected to compensate an error based on a flow rate of said

blood flowing through said blood circuit.

17. (Previously Presented) The method of claim 15, wherein said hematocrit values

calculated in said calculating are corrected to compensate an error based on a flow rate of said

blood flowing through said blood circuit.

18. (Previously Presented) The method of claim 14, further comprising:

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detecting a presence of said blood flowing through said blood circuit, wherein the

calculating starts calculating a first of said hematocrit values at a time said detecting first detects

said presence of said blood.

19. (New) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to the blood circuit between the two ends and configured to

purify blood that is being circulated extracorporeally in the blood circuit; and

a sensor connected to the blood circuit and configured to measure hematocrit values, the

sensor including

a housing connected to a portion of the blood circuit,

a slot provided with the housing,

one of a slit or a plurality of pores included in the slot of the

housing, and

a single light emission device and a single light reception device both provided

with the housing and configured to be in optical connection with each other and face the

blood circuit through either the slit or the plurality of pores, respectively.

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